Nounness, gender, class and syntactic structures in Italian nouns

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This work proposes an analysis of Italian nouns. It explores the concept of the “final vowel” and claims that it is an analyzable object which is active in the formation of nouns in the language. The paper suggests that each “final vowel” is a complex morphophonological object (in the spirit of Kaye, Lowenstamm & Vergnaud 1985, 1990) and that only a syntactic approach to noun formation (Halle & Marantz 1993) can fully account for the distribution of such morphophonological complexes. On a more general level, the analysis depicted explains the behavior and the formation of non-derived simple nouns in Italian.

1. Introduction

Italian nouns are an interesting challenge for morphological theory because of two particular aspects: (1) the vocalic alternation between singular and plural and (2) the presence of clearly different vocalic patterns relying singular to plural (o-i, a-e, e-i, etc..). Both phenomena contrast with the general behavior of Romance Languages where (1) plural marker is generally consonantal (/s/in Spanish, Portuguese, Catalan, etc..) and (2) no prediction can be made on the form of final syllable on nouns. In the theoretical perspective of Distributed Morphology (Halle & Marantz 1993, 1994; Halle 2000; Marantz 1997, 2001 and 2007; Harley & Noyer 1999; Embick & Noyer 2006 among the most relevant ones), the morphological complexity of a given language is expressed by the increasing number of functional projections. The question is now whether Italian has complex nominal structures or simple ones of the type \([n [\sqrt{\_}]_{\text{np}}]\).

To show how nouns are built in Italian, I propose an account that stems from the general framework of Distributed Morphology as interpreted in two important

1. I benefited from discussions with Paolo Acquaviva, Anna Cardinaletti, Noam Faust, Jean Lowenstamm, Isabel Oltra-Massuet and Philippe Ségéral and I thank all of them.
The general idea is that Phonology can interact directly with syntactic nodes and that phonological strings are formed by Syntax: in this light, I can generalize Lowenstamm’s (1996) hypothesis that a templatic tier formed by CV units is found in the representation of each word. I assume the following default representation for a noun:

(1) Structure of a noun (cf. Lowenstamm 2008)

```
DP
   numP
      num    nP
         |    |  √
         n     (CV) (CV) CVCV
```

2. The data, the “final vowel” and a general hypothesis

A general and well-known feature of Italian nouns is that they must all end in a vowel. Loanwords are generally an exception to this phenomenon. Moreover, an important fact is that this final vowel on nouns is generally unstressed. A crucial point must be mentioned here: if the final vowel is stressed then (1) all the five vowels in the phonological system of the language are allowed to be in that position, and (2) the noun is invariable in number marking. Put in another way: an oxyton noun is invariable in Italian. I show an example for each possible stressed final vowel (underlined) in (2):

(2) Oxyton nouns (invariable)

a. [čit.ta] “town”
b. [kaf.fe] “coffee”
c. [sup.pli] “fried rice”
d. [o.blo] “porthole”
e. [vir.tu] “virtue”

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2. Some examples of loanwords are: film ‘movie’, sponsor ‘sponsor’, pullman ‘bus’, computer ‘computer’, etc..
On the other hand, if the final vowel is not stressed, then (1) the set of possible vowels appearing in this position is restricted, and (2) the noun is never invariable as far as number is concerned. The table below shows these data:

(3) Italian variable nouns

<table>
<thead>
<tr>
<th></th>
<th>sg.</th>
<th></th>
<th>pl.</th>
<th></th>
<th>gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td><em>lupo</em></td>
<td>“wolf”</td>
<td><em>lupi</em></td>
<td>“wolves”</td>
<td>M</td>
</tr>
<tr>
<td>b.</td>
<td><em>rosa</em></td>
<td>“rose”</td>
<td><em>rose</em></td>
<td>“roses”</td>
<td>F</td>
</tr>
<tr>
<td>c.</td>
<td><em>poeta</em></td>
<td>“poet”</td>
<td><em>poeti</em></td>
<td>“poets”</td>
<td>M</td>
</tr>
<tr>
<td>d.</td>
<td><em>ala</em></td>
<td>“wing”</td>
<td><em>ali</em></td>
<td>“wings”</td>
<td>F</td>
</tr>
<tr>
<td>e.</td>
<td><em>cane</em></td>
<td>“dog”</td>
<td><em>cani</em></td>
<td>“dogs”</td>
<td>M</td>
</tr>
<tr>
<td>f.</td>
<td><em>nave</em></td>
<td>“ship”</td>
<td><em>navi</em></td>
<td>“ships”</td>
<td>F</td>
</tr>
</tbody>
</table>

In this work, I focus on the type of final vowels underlined in (3) (henceforth $V_{\text{fin}}$).

Two interesting restrictions on the realization of $V_{\text{fin}}$ can be detected by comparing (2) and (3): first, [u] never appears alone in this position. In addition, $V_{\text{fin}}$ is never the same in [A] and [B]. This second point is crucial for the development of the argument.

An important question arises in the light of these observations: what is the role of $V_{\text{fin}}$?

A first hypothesis would suggest that $V_{\text{fin}}$ enforces a phonological well-formedness requirement to the effect that no noun remains consonant-final. But this is clearly and logically false, for the following two reasons. First, if $V_{\text{fin}}$ were an epenthetic vowel, we’d expect only one and not four different ones. In a given environment, an epenthetic vowel is always the same, e.g. [i] or [e] but never both of them. Secondly, some final-hiatus words exist:

(4) $V.V^#$ words

a. [ma.re.a] ‘tide b. [nu.cle.o] ‘nucleus’ c. [bo.a] ‘float’

There would not be any need of $V_{\text{fin}}$ after a root ending in a vowel as the ones in (4) if $V_{\text{fin}}$ were epenthetic. We must drop this explanation and explore another one.

I claim that $V_{\text{fin}}$ is the phonological exponent of one or more syntactic terminals, in the sense of Embick and Noyer (2006). The goal of this work is to show that

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3. There are few exceptions to this general rule, but the majority of this kind of words are Greek loans, such as *analisi* (sg. and pl.) ‘analysis’, *crisi* (sg. and pl.) ‘crisis’ and so on.

4. The Italian native lexicon has some final-diphthong words, too which may be interpreted as ending in a slot of a high vowel followed by a non-high one giving rise to a final diphthong, such as *individuo* “individual” and *scempio* “havoc”
V_{fin} is necessary for a root to become a well-formed noun.\(^5\) Final vowels in Italian are considered in the literature as simplex gender and/or class markers (cf. Acquaviva 2008a, 2008b; Alexiadou 2004; Ferrari 2005 and Thornton 2001, among the most relevant ones) but they’ve never been viewed as analyzable items. I propose that these V_{fin}’s are in fact analyzable objects on both phonological and morphosyntactic levels.

3. The analysis

The analysis proceeds as follows: in the first part (3.1), I analyze the nature of V_{fin}, adopting a phonological view. In the second part (3.2), I propose a structure for V_{fin} and an explanation for its behavior.

3.1 Significant complex vowels

Observe the following inventory of V_{fin} in the singular and in the plural, respectively:

(5) V_{fin} inventory
    a. Singular
       e
       o
       i
    b. Plural
       e
       a

A general lowering phenomenon is recognized by traditional linguistics to be responsible for the absence of high vowels in unstressed syllables in Italian (cf. Rohlfs 1966:5–12; 51–64; 178–189 among others).\(^6\)

Consider now the theory of Elements (Kaye, Lowenstamm & Vergnaud 1985, 1990) (henceforth KLV), which decomposes mid vowels into primary phonological elements. The general idea in this theory is that the parameters governing the combination of three basic vocalic Elements (/A/, /I/ and /U/) generate all the possible vowel systems. For the Italian unstressed vocalic inventory, this gives the following results:

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5. Note that the roots in (3) are not well-formed nouns unless spelled out with the right V_{fin}: *lup, *ros, *poet, etc... The same applies for roots in (4) as *mare, *nucle, etc...

6. The situation is quite complex: final [u] were generally short vowels and therefore they were lowered whereas final [i] were generally long ones and thus they did not undergo lowering (cf. Rohlfs 1966:5–189 for an exhaustive survey on vocalism in Italian).
Italian vowel
a. \([a] = /A/\)  
b. \([i] = /I/\)  
c. \([u] = /U/\)  
d. \([e] = /I.A/\)  
e. \([o] = /U.A/\) 

I recast the data presented in (5) in the light of the decomposition of each \(V_{\text{fin}}\) shown in (6):

(7) Decomposed \(V_{\text{fin}}\)’s

<p>| | | | | | |</p>
<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A.I</td>
<td>A.U</td>
<td>I</td>
<td>A.I</td>
<td>A</td>
</tr>
</tbody>
</table>

Two facts are strikingly evident in (7): the Element/A/is always present in the singular while Element/I/is always present in the plural. Moreover, /A/ and /I/ can appear alone or in combination in one given \(V_{\text{fin}}\), while /U/ can never appear alone. As a consequence, I propose to interpret /A/ and /I/ as the markers of the singular and the plural, respectively:  

(8) Number markers (henceforth NbM)

a. /A/ marks the singular (henceforth /A\text{sg}/).

b. /I/ marks the plural (henceforth /I\text{pl}/).

If \(V_{\text{fin}}\) is a complex vowel as shown in (7), what is the role of the other Element appearing in it? I propose to reorganize the data as shown below:

(9) \(V_{\text{fin}}\) paradigm

<p>| | | | | | | | |</p>
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>sg.</td>
<td>gender</td>
<td>examples</td>
<td>pl.</td>
<td>gender</td>
<td>examples</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----</td>
<td>--------</td>
<td>--------</td>
<td>----</td>
<td>--------</td>
<td>--------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a.</td>
<td>/A\text{sg}/</td>
<td>U</td>
<td>(lupo)</td>
<td>/I\text{pl}/</td>
<td>U</td>
<td>(lupi)</td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td>/A\text{sg}/</td>
<td>F</td>
<td>(rosa)</td>
<td>/I\text{pl}/</td>
<td>A</td>
<td>(rose)</td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td>/A\text{sg}/</td>
<td>ø</td>
<td>(poeta, (ala))</td>
<td>/I\text{pl}/</td>
<td>ø</td>
<td>(poeti, (ali))</td>
<td></td>
</tr>
<tr>
<td>d.</td>
<td>/A\text{sg}/</td>
<td>I</td>
<td>(cane, nave)</td>
<td>/I\text{pl}/</td>
<td>I</td>
<td>(cani, navi)</td>
<td></td>
</tr>
</tbody>
</table>

First, note that the language particular aspect of Italian nouns is that number must always be introduced in the structure, contrarily to the general assumption that a singular noun has a simpler structure than a plural one, in a system based on two numbers.

Secondly, the plural \(lupi\) ‘wolves’ (9.a) deserves special attention. According to KLV’s theory of elements, a central tenet of five-vowel systems is the ban on the combination of the elements U and I, a combination which would yield a front

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7. The idea that Italian has two number markers has been explored by Passino (2008), too. In her analysis, though, this decomposition is not implemented within a syntactic approach to word formation.
rounded [y]. When, as in the case of lupi ‘wolves’, the morphology derives such a combination, it surfaces as a simplified [i]. I propose that only/I/surfaces because of its plural marking specification (Lowenstamm P.C. and Passino 2008).8

Finally, consider that besides the inflectional material (/A_sg/ and/I_pl/), each V_fin contains one of the following additional Elements: U, A, I and ø (zero). I assume that each root selects one of these basic Elements or none (the zero option, cf. (9.c)).

As a consequence, I claim that Italian has the following four groups of roots:9

(10) Groups of roots

It is impossible to predict whether a given root will select A or I, for example. This association is lexical, even if in the next section I will show that there is a tiny degree of predictability if we consider gender. I call these lexical vowels Root Elements (henceforth RE): an analysis of these items is proposed in Section 3.2.

To summarize, V_fin can be identified by the following algorithm:

(11) \( V_{\text{fin}} = \text{NbM} \{A_{\text{sg}}, I_{\text{pl}}\} + \text{RE} \{A, I, U, \text{zero}\} \)

An intermediary conclusion can now be stated: understanding V_fin requires its decomposition. The two components of V_fin have different natures: one is morphological (NbM) whilst the other one is lexical (RE). In the following section, I will claim that Italian noun structures are syntactic.10

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8. Another argument can be taken from Greek borrowings to Latin: words such as Gr. αναλυσις have systematically been transliterated as analysis where ⟨y⟩ was pronounced [i] as no front rounded vowels existed in Latin. A reviewer has turned my attention to Valdman (1973) where the author discusses French-based Haitian Creole. In this language, ⟨y⟩ seems to be reinterpreted as [i] or [u]. First of all, Valdman says that in the early stage of the Creole, the borrowings used [u] whereas in contemporary language, only [i] surfaces; notice that the theory of Elements only claims that five vowel languages cannot have front rounded vowels, but it does not say which Element will win the competition. As far as Italian is concerned, I claim that only [i] can surface, which does not exclude the possibility that in an early stage of Haitian Creole, [u] has surfaced, too.

9. Guerssel & Lowenstamm (1993) propose a similar account for verbal roots in Classical Arabic. In their work, each measure I verb has a lexical vocalization for V2. For example, given the following past forms: kataba “he wrote”, kabura “he grew”, labisa “he wore” and hamala “he carried”, each root has a lexical V2 which is either/a/or/u/or/i/or zero. The Italian case looks very similar in this respect. See Ségéral (1995) for a detailed and extended application of the theory of apophony.

10. An anonymous reviewer has pointed out that a crucial element in the algorithm (11) is the gender feature [±f], hence its nature is not determined only phonologically. I claim this explicitly in the next section when I argue for a syntactical formation of V_fin’s.
3.2 Syntactic structures in Italian nouns

3.2.1 The default structure and $V_{\text{fin}}P$

Building on the literature (Bendjaballah & Haiden 2008, Embick & Noyer 2001, Lowenstamm 2008 and Piggott & Newell 2006) and considering the data, the primary analysis above leads me to claim that each root merges with one of the RE’s and the nP thus formed is selected by the num head. Let us begin with the simplest occurrence of $V_{\text{fin}}$ namely when $\text{RE} = \emptyset$ (cf. (9c)). This case corresponds to poeta-type nouns (cf. (3c)); its structure is shown in what follows:

(12) Poeta-type

\begin{itemize}
  \item a. $V_{\text{fin}} = [a], \text{ M, pl}$
  \item b. $V_{\text{fin}} = [i], \text{ M pl}$
\end{itemize}

In (12), the head $n$ provides no special information. Assuming that it is $n$ that is responsible for information about gender, we expect such cases to be of the default gender, namely masculine. The possibility that $n$ carries a $[+f]$ specification is, however, not ruled out. Indeed, although most poeta-type nouns are masculine, there are also two feminine nouns in this group: ala “wing” and arma “weapon” (cf. (3d)).

Before turning to cases in which $\text{RE} = A, U$ or $I$, a detour into adjectival morphology will prove useful evidence for my claims. Consider the adjectival paradigms as shown below:

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11. It is clear that if $V_{\text{fin}} = \text{NbM} \{A_{\text{sg}}, I_{\text{pl}}\} + \text{RE} \{A, U, I, \text{zero}\}$, as per the hypothesis laid out in (11), the simplest occurrence of $V_{\text{fin}}$ is the one in which $\text{RE}$ is phonologically zero.
(13) Adjectival paradigms

<table>
<thead>
<tr>
<th>sg.</th>
<th>Gender</th>
<th>pl.</th>
<th>gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>bello</td>
<td>“beautiful”</td>
<td>belli</td>
<td>“beautiful”</td>
</tr>
<tr>
<td>bella</td>
<td>“beautiful”</td>
<td>belle</td>
<td>“beautiful”</td>
</tr>
<tr>
<td>facile</td>
<td>“easy”</td>
<td>facile</td>
<td>“easy”</td>
</tr>
</tbody>
</table>

Three vocalic patterns are easily recognized in (13):

(14) Adjectival vocalic patterns

a. [o]-[i] (M)  
b. [a]-[e] (F)  
c. [e]-[i] (M/F)

For a given adjectival root, if it fits into the pattern (14a), the corresponding feminine is always in group (14b). On the other hand, as the example in (13) shows, a given adjectival root fitting the [e]-[i] vocalism cannot have a feminine in group (14b): *facila, F “easy”.

Acquaviva (2008b) notes that there is a hierarchy on vocalic patterns in terms of variety: nouns have the richest inventory (o-i, a-e, e-i, a-i, o-a, etc.), followed by adjectives (cf. (14)) and then determiners. Nevertheless, what seems to be important for agreement is a restricted inventory of vocalic patterns. Consider the following examples:

(15) Agreement in noun phrase

a. lo/quello stanco gatto bianco  
   the/that-m.sg tired-m.sg cat-m.sg white-m.pl  
   “The/that tired white male cat”

b. la/quella studiosa francese  
   the/those-f.sg scholar-f.sg French-sg  
   “The/those French female scholar”

c. le/quelle studiose francesi  
   the/those-f.pl scholar-f.pl French-pl  
   “The/those French female scholar”

d. il/questo poeta tedesco  
   the/this-m.sg poet-sg German-m.sg  
   “The/this German poet”

The agreement vowel on adjectives follows the pattern in (13) regardless of the $V_{\text{fin}}$ pattern of the noun.12 For example, in (15b), nominal $V_{\text{fin}}$ [a] represents a singular

12. As for the agreement vowel on the determiner, it has three forms for masculine: [lo], [il] and [l]. For each singular, there is a correspondent plural form. The puzzle is completely phonological as shown in Larsen (1998). An important question is still unanswered: why does Italian allow a zero agreement marker for M in the case of the article (that is the default case) but not
feminine but given the adjective *francese* ‘French’, the corresponding agreement vowel for singular is [e] for both feminine and masculine: it depends on the class which is selected by the root.

Consider now the RE’s and the following observations: (1) *lupo*-type nouns (cf. 3a) are all masculine;13 (2) *rosa*-type nouns (cf. 3b) are all feminine and (3) *cane* and *nave* types (3e and 3f) don’t allow any prediction for gender. In the previous section I claimed that each root bears a lexical RE. I now propose that Italian roots that select a non null RE are organized into two classes, as illustrated below:

16. **Italian roots and RE’s:**

<table>
<thead>
<tr>
<th>√</th>
<th>RE</th>
<th>gen.</th>
<th>class</th>
<th>Vfin (sg./pl.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>lup</td>
<td>U</td>
<td>M</td>
<td>1 [o] [i]</td>
</tr>
<tr>
<td>b.</td>
<td>ros</td>
<td>A</td>
<td>F</td>
<td>1 [a] [e]</td>
</tr>
<tr>
<td>c.</td>
<td>can</td>
<td>I</td>
<td>M</td>
<td>2 [e] [i]</td>
</tr>
<tr>
<td>d.</td>
<td>nav</td>
<td>I</td>
<td>F</td>
<td>2 [e] [i]</td>
</tr>
<tr>
<td>e.</td>
<td>poet</td>
<td>ø</td>
<td>M</td>
<td>default</td>
</tr>
</tbody>
</table>

A question arises now: which projection introduces the RE’s?14 Is it nP? I follow Lowenstamm (2008) and Kihm (2002) in assuming that the head *n* introduces the gender feature [±f].

As a consequence, I assume that both nP and numP manage that part of morphology that is predictable. In contrast, I postulate that the lexical level must be lower than nP. Once the root selects its class, then the corresponding RE is totally predictable from gender.15 Recall that, for a given root, the selection of the class is totally unpredictable. To account for this puzzle, I propose the use of a functional

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13. As far as I know my native language, *mano* “hand” is the only feminine variable noun ending in [o]. I consider it to be an exception. Ferrari (2005) claims that *virago* “virago” and *sinodo* “synod” also follow the pattern [o]-[i] being feminine but I do not. For me *sinodo* is M and *virago* has an invariable plural if F or a regular one *viraghi* if considered M.

14. Consider RE’s from the default class to class 1: they seem to be linked one to the other by the apophonic path ø → i → a → u (Guerssel & Lowenstamm 1993), in the direction of the arrow. It could be interesting to investigate whether this observation entails some kind of predictability about the nouns.

15. The point is that class assignment is lexical and that once the system handles a given root and the class information associated to it, it merges this piece of structure to a *n*. Now, it could be argued that there is a redundancy in the specification of both class and gender, as one could assert that the root lexically selects for either I/or nothing: in the first case one would get class 2 nouns (16c and 16d) whereas in the second case class 1 nouns (16a and 16b) would be defined. This solution only seems simpler, as in such a case, one cannot account for default class nouns.
projection $V_{\text{fin}}P$\textsuperscript{16} the specifier of the root. The head of the projection, $V_{\text{fin}}$, has the following properties: (1) it introduces a CV syllable; (2) it bears lexical the information associated to the root (class 1, 2, etc.) and (3) it undergoes agreement with $n$. The result of the spell out of the agreement operation is one RE. I show the structures for both $lupo$ ‘wolf’ and $rosa$ ‘rose’ in what follows:

(17) Noun structures: class \{1\}

a. $lupo$ ‘wolf’ M, sg

\[
\begin{array}{c}
\text{numP} \\
\text{num} & \text{nP} \\
\text{[-pl]} & \text{n} & \sqrt{P} \\
\text{[-f]} & V_{\text{fin}}P & \sqrt{'} \\
\text{V}_{\text{fin}} & \sqrt{1} \\
\text{C1\{1\}} & \\
\text{CV} & \text{CVCV} \\
\text{A}_{\text{sg}} & \text{U} & l u p
\end{array}
\]

Output: [lupo]

b. $rosa$ ‘rose’ F, sg

\[
\begin{array}{c}
\text{numP} \\
\text{num} & \text{nP} \\
\text{[-pl]} & \text{n} & \sqrt{P} \\
\text{[+f]} & V_{\text{fin}}P & \sqrt{'} \\
\text{V}_{\text{fin}} & \sqrt{1} \\
\text{C1\{1\}} & \\
\text{CV} & \text{CVCV} \\
\text{A}_{\text{sg}} & \text{A} & r o s
\end{array}
\]

Output: [rosa]\textsuperscript{17}

The arrows indicate the agreement between $V_{\text{fin}}$ and $n$. With the pieces of information that the structure gives at the level of $\sqrt{P}$, the higher part of the structure is totally predictable. The edge of lexicality is $\sqrt{P}$: if this is indeed the case, then I predict that the meaning is built at this level and that, in the case of a diminutive on the noun (or any other nominal suffix), its position is the same as the one of $V_{\text{fin}}P$ allowing for a large number of non-compositional diminutives. I’ll return to

\textsuperscript{16} This is a provisional label for this projection. In Faust & Lampitelli (2009), Tem(plate)P has been proposed for both Italian and Modern Hebrew. Another possible label is Th(eme)P (cf. Oltra-Massuet 2000 and Oltra-Massuet & Arregi 2005).

\textsuperscript{17} Note the phonological /s/ becomes [z] in my regional variety. The context of this occurrence is the intervocalic position.
this point below, after having discussed the other nominal structures. As for class {2} nouns, they are built as shown below:

(18) Noun structures: class {2}

a. cane ‘dog’ M, sg

b. nave ‘boat’ F, sg

The mechanism is the same as for Cl{1} nouns. However, as already noticed, V_{fin} is not the same in both classes. In (18) Cl{2} label is always interpreted as the element/I/ and it gives rise to [e] for both genders.

In (17) and (18), I showed the structures for the core nouns in the language. It is now clear that the nature of V_{fin} as stated by the algorithm in (11) is both syntactic and phonological. The difference between the two classes is the label in V_{fin} associated to the root.^{18} Beyond √P, form is perfectly predictable and regular.

Due to the lack of space, I will not show the plural structures. Plural nouns are built by changing the value to the feature [pl] ([+pl] instead of [-pl]): by consequence, the spelled-out NbM is/I_{pl}/. For the form of plural lupi “wolves”, see supra, Section 3.1.

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^{18} Another anonymous reviewer has pointed out that in (18b) nothing seems to prevent the root nav ‘boat’ with a V_{fin} = cl {2} to be merged with a [-f]. This is almost the case: the only thing that prevents nave ‘boat’ from being an M noun instead of an F one is that when the root √nav becomes a noun, it triggers a F marking. Cf. Embick and Marantz (2008) for discussion on blocking and gaps in the architecture of words.
3.2.2 Additional arguments for $V_{\text{fin}}P$: Diminutives and loan words

I reject the idea that roots are labeled as in Embick & Halle (2005); rather, I follow Marantz (2001), in considering that roots bear no information but their semantics and their phonology without any categorial information.\(^{19}\) The proposed account including $V_{\text{fin}}P$ shows that there is a lexical association between a given root and a given piece of information about the class: as a result, we have $\sqrt{P}$, instead of simple $\sqrt{}$.

In this section I put forward two main arguments to dismiss any doubt about the necessary presence of $V_{\text{fin}}P$. The first one comes from the representation of diminutives (or augmentatives): I show that by postulating the presence of $V_{\text{fin}}P$ we can account for diminutive structures, too. The second argument is found in loanwords, which clearly exhibit no $V_{\text{fin}}P$: the only way to account for the difference between loanwords and variable nouns (cf. (3)) is to postulate this projection.

Recall the structure in (12) representing poeta-type nouns with the ingredients to build lupot-type, rosa-type or cane/nave-type nouns: a $\sqrt{}$, a class label ({1} or {2}) and a gender feature to be introduced by $n$. Now, to build a diminutive, e.g. rosina ‘little rose’, a projection dimP should be introduced into the structure.\(^{20}\) This is shown in (19):

\[(19)\] Wrong diminutive structure

\[\begin{array}{c}
\text{numP} \\
\text{num} \quad \text{dimP} \\
\text{dim} \quad \text{nP} \\
\text{n} \quad \sqrt{} \\
\text{CV} \quad \text{CV} \quad \text{CVCV} \\
\text{I}_{\text{pl}} \quad \text{in} \quad A \quad \text{ros} \\
\end{array}\]

Output: $\text{ros} + A + \text{in} + \text{I}_{\text{pl}} = [*\text{rosaini}]$ or $[*\text{roseni}]$

\(^{19}\) Acquaviva (2008a) too follows the idea that roots are radically underspecified.

\(^{20}\) Whether diminutive projects an independent phrase or not is not the central issue of this work. I assume that it does, following Lowenstamm (2008).
The structure above suggests that dimP cannot be merged between numP and nP because of the wrong output. Moreover, \( n \) should know which RE to spell-out: in \((19)\) there is no feature or label providing the information to \( n \).

The following data help to understand what happens when a diminutive (or an augmentative) suffix is inserted into a noun:

(20) Basic and diminutive forms

<table>
<thead>
<tr>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Basic</td>
<td>g. Plural</td>
</tr>
<tr>
<td>rosa “rose”</td>
<td>F rosa “roses”</td>
</tr>
<tr>
<td>b. Dim.</td>
<td>ro sina “little rose” F</td>
</tr>
<tr>
<td>dente “tooth”</td>
<td>denti “teeth” M</td>
</tr>
<tr>
<td>poet “poet”</td>
<td>poeti “poets” M</td>
</tr>
<tr>
<td>g. Basic</td>
<td>g. Plural</td>
</tr>
<tr>
<td>poetino “little poet” M</td>
<td>poetini “little poets” M</td>
</tr>
<tr>
<td>film “movie”</td>
<td><em>film</em> /film “movies” M</td>
</tr>
<tr>
<td>filmino “little movie” M</td>
<td>filmini “little movies” M</td>
</tr>
</tbody>
</table>

Note that the presence of the diminutive entails the total predictability of the final vowel in the derived nouns: \(21 \) [o] for M and [a] for F in the singular and [i] for M and [e] for F in the plural. This is indeed the case with all the suffixes of this kind (\( -etto, -accio, -ello, \) etc.). \(22 \) The final vowel in diminutives replaces any previous V\(_{\text{fin}}\) spelled-out by the basic noun structure, e.g. in dente ‘tooth’ V\(_{\text{fin}} = A_{\text{sg}} + I = [e]\), but in dentino ‘little tooth’ there is an agreement vowel [o] as the noun is masculine. Note also that *dentine* is totally ungrammatical. I conclude that dimP and V\(_{\text{fin}}\)P are in complementary distribution and I propose for this reason that they appear in the same place in the nominal syntactic structure:

21. Even the exception mano ‘hand’, F sg. has a regular DIM form manina ‘little hand’, F sg.

22. The augmentative suffix \( -one \) seems to behave in a different way as in M sg. its final vowel is [e] (but it is otherwise totally regular). I will not treat this case, even though I think that the masculine [o] is contained in the stem [on] (there is a historical reason for this among others).
Two diminutive nouns

a. *dentino* “little tooth” M, sg
b. *rosine* “little roses” F, pl

DimP bears a CV unit and $n$ looks for the class information in $\sqrt{P}$: in this case, dimP has no such information. Therefore, $n$ creates the agreement vowel U or A, for M and F respectively.\(^{23}\) The property of the root to select a particular class is not used, as the position is filled by the projection dimP. This proposal has a strong implication about the nature of diminutives in Italian: we expect there to be many non-compositional types of diminutives. This is indeed the case: nouns formed by a nominal root plus a diminutive/augmentative are very common in Italian: *panino* ‘sandwich’ from *pane* ‘bread’ + dim; *bancone* ‘lunch counter’ from *banco* ‘desk’; *aquilone* ‘kite’ from *aquila* ‘eagle’, etc..

There is also a phonological argument in favor of this view of diminutives. Consider the intervocalic/s/voicing in Northern Italian varieties:

(22) Intervocalic voicing

a. /kas + a/ → [kaza] “home”
b. /kas + in + a/ → [kazina] “little house”
c. /sentire/ → [sentire] “hear”
d. /ri + sentire/ → [risentire] “feel”

---

\(^{23}\) I consider that final vowels in diminutives (or augmentatives) suffixes are agreement vowels as the ones in (15). But the question is still open, as it could be argued that diminutives always select class 1. Additional researches should clarify this point.
In (22a) and (22b) voicing occurs in an intervocalic environment; this does not occur in (22d), despite the intervocalic environment. This suggests that the diminutive is merged in the same cycle as the root, i.e. low in the structure. If dimP were higher in the structure, we should expect the form [*kasina] in Northern varieties. On the other hand, in the case of the verb, the item [sentire] has already been spelled-out when a new morphological operation inserts the morpheme [ri].

Take now the case of consonant-final loanwords such as film ‘movie’ (cf. (20)). These words do not take the vocalic plural even if there is clearly an empty V slot on the CV tier. Notice that, phonologically, it is more natural for an Italian native speaker to pronounce *filmi than film. This suggests that there is some structural property that prevents the NbM/Ipl/from associating to the free V slot.

I claim that this structural property which makes film-type nouns act unlike lupo, rosa, cane and nave is the projection VfinP and the syllable it bears. The CV unit introduced by VfinP is the only possible site for inflectional morphology. This is why filmino ‘little movie’ acts as a regular diminutive: as I claimed above, dimP bears a CV unit which allows the association of agreement vowels as well as NbM’s.

It follows naturally from these observations that the status of poeta-type nouns shown in (12) is incorrect. These nouns do have the projection VfinP which introduces the CV unit and nothing else. In (23), I show the structures for poeta and film:

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25. Kaye (1995:301–318) proposes a theory of phonological derivation in Government Phonology which could explain the data in (22) by arguing that (22b) is a non-analytic derivation whereas (22d) is an analytic one (with internal phonological domains). My proposal goes in the same direction, and offers a syntactic reason for phonological domains. Cf. also Di Sciullo (2005:75–97) for the analysis of verbs such as risentire in Italian.
26. In some regional varieties, an epenthetic [e] appears: the dialect of Rome has [firme] with the typical rhoticism. In other varieties, an epenthetic schwa can also appear, as in Neapolitan (it seems to me that it must spelled with ⟨e⟩: Neapolitan): [filma].
(23) Basic structures: empty CV and no CV

a. *poeta* “poet” M, sg

\[
\begin{align*}
\text{numP} \\
\text{num} & \quad \text{nP} \\
[+\text{sg}] & \quad \text{n} \\
\end{align*}
\]

\[
\begin{align*}
\text{V_{fin}P} & \quad \sqrt{P} \\
\text{V_{fin}} & \quad \sqrt{P} \\
\text{CV} & \quad \text{CVCV}
\end{align*}
\]

\[
\begin{align*}
\text{A_{sg}}
\end{align*}
\]

Output: [poeta]

b. *film* “movie” M, sg

\[
\begin{align*}
\text{numP} \\
\text{num} & \quad \text{nP} \\
[+\text{sg}] & \quad \text{n} \\
\end{align*}
\]

\[
\begin{align*}
\text{CV} & \quad \text{CVCV}
\end{align*}
\]

\[
\begin{align*}
\text{A_{sg}}
\end{align*}
\]

Output: [film]

/A_{sg}/ cannot be associated with the free V slot in the structure of *film* as the only possible site for inflectional morphology is the CV unit introduced by either V_{fin}P or dimP, and neither is present in (23b). The configuration in (23) explains the differences between *poeta* and *film* regarding the property of displaying NbM’s. The free V slots in √ have the same phonological status in both (23a) and (23b): a purely phonological approach cannot account for the difference in the behavior of the two roots.

My hypothesis implies that any noun (basic or complex) having some number and/or gender morphology must have a low projection introducing at least a CV unit.

4. Towards a classification of Italian (nominal) roots

The main goal of this work was to discover the ingredients that a speaker of Italian needs in order to construct a noun in this language: I showed that a noun is formed by a root, an RE and an NbM. The quality of an RE depends on the presence of the projection V_{fin}P associated to the root. I further distinguished between lexical pieces of information and predictable ones (as NbM’s). Then, in Section 3.2.2, I proposed that the projection introducing the diminutive – dimP – occupies the same position as V_{fin}P, and the two are in complementary distribution (cf. (20)).
In the light of this proposal, I claim that these two projections – \( V_{\text{fin}} \) and \( \text{dimP} \) – represent a more general property of nouns, a sort of classificatory device as in languages displaying nominal classes. Further research should clarify this claim, and explain why this level between \( \text{nP} \) and \( \sqrt{\cdot} \) must be included in the structure (cf. Lampitelli (In progress)). Moreover, notice that Italian verbs also carry RE’s:27

(24) Italian verbs

<table>
<thead>
<tr>
<th>conj.</th>
<th>infinitives</th>
<th>Pres.3Sg</th>
<th>Pres.3Pl</th>
<th>Past part.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. I</td>
<td>saltare</td>
<td>salta</td>
<td>saltano</td>
<td>saltato</td>
</tr>
<tr>
<td>b. II</td>
<td>godere</td>
<td>gode</td>
<td>godono</td>
<td>goduto</td>
</tr>
<tr>
<td>c. III</td>
<td>partire</td>
<td>parte</td>
<td>partono</td>
<td>partito</td>
</tr>
</tbody>
</table>

The underlined vowel is associated with each conjugation; it is not predictable whether a given root appears with [a] or [e], for example. On the other hand, within the conjugation, the vowel changes are totally predictable depending on Mood, Tense and Person. Because of space reasons, I will not go deeper into this topic; this short deviation is meant to show that in Italian there is an additional projection between any category-defining head and \( \sqrt{\cdot} \).

5. Conclusions

This paper introduced two notions that accounted for the behavior of Italian nouns: the first one is \( V_{\text{fin}} \), a complex item formed by two Elements, an RE and an NbM; the second one is the projection \( V_{\text{fin}} \), which introduces an inflectional CV site and the RE associated with the specific root. I have showed that a simple phonological account does not explain all the regularities having to do with \( V_{\text{fin}} \); only a syntactic approach to noun formation enables us to account for the different status of final free V slots in \text{film} and \text{poeta}.

More specifically, I have identified the structural origins of the external site of inflectional morphology: this position is provided by an independent projection \( V_{\text{fin}} \). This can have further theoretical implications about noun formation and noun structures in non related languages.

I conclude showing the general organization of \( V_{\text{fin}} \) in nouns:

27. In traditional Indo-European linguistics it is assumed that roots select the so called ‘thematic vowel’ giving rise to the ‘theme’. Latin and Romance languages, in particular, clearly show this vowel which is totally unpredictable. See Benveniste (1984) for an interesting theory on word formation.
(25) Nouns with V\textsubscript{fin}P

<table>
<thead>
<tr>
<th>Type</th>
<th>sg.</th>
<th>gen.</th>
<th>pl.</th>
<th>gen.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. default</td>
<td>A\textsubscript{sg},ø</td>
<td>M</td>
<td>I\textsubscript{pl},ø</td>
<td>M</td>
</tr>
<tr>
<td>b. class 1</td>
<td>A\textsubscript{sg},U</td>
<td>M</td>
<td>I\textsubscript{pl},U</td>
<td>M</td>
</tr>
<tr>
<td>c.</td>
<td>A\textsubscript{sg},A,F</td>
<td>F</td>
<td>I\textsubscript{pl},A,F</td>
<td>F</td>
</tr>
<tr>
<td>d. class 2</td>
<td>A\textsubscript{sg},I</td>
<td>M/F</td>
<td>I\textsubscript{pl},I</td>
<td>M/F</td>
</tr>
</tbody>
</table>

References


Thornton, Anna. 2001. “Some reflections on gender and inflectional class assignment in Italian”.